



# MODEL RESPIRATORY PROTECTION PROGRAM FOR LAW ENFORCEMENT



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## **The Mission**

of the California Commission on Peace Officer Standards and Training is to continually enhance the professionalism of California law enforcement in serving its communities.

# **Model Respiratory Protection Program for Law Enforcement**

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# PREFACE

Cal/OSHA Regulation 5144 requires employers to develop and implement a written respiratory-protection program that includes worksite procedures and elements for required respirator use. The regulation also specifies the minimum medical evaluation requirements determining an employee's ability to use a respirator.

The *Model Respiratory Protection Program for Law Enforcement* will assist POST law enforcement agencies in developing their own written agency program that satisfies Cal/OSHA requirements. Agencies may make amendments to fit their agency specific program. The model program was developed by POST, in conjunction with Cal/OSHA, the California Police Chief's Association, and the California State Sheriff's Association.

This model program is intended to clarify the requirements for law enforcement to meet Cal/OSHA standards in the following areas:

- Employee medical requirements
- Annual equipment fit testing
- Annual training in the use of air purification and powered air purification respiratory equipment use

For related information, see POST Bulletin 04-01. For the complete text of Regulation 5144, see the California Code of Regulations, Title 8, Division 1, Chapter 4.7.16, article 107. For model program questions, contact Senior Consultant Jan Bullard, Training Program Services, at (916) 227- 4887. For training video questions, contact Senior Consultant Jody Buna, Training Program Services at (916) 227-4896.

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# MODEL RESPIRATORY PROTECTION PROGRAM FOR LAW ENFORCEMENT

## I. PURPOSE

The purpose of this program is to provide law enforcement agencies with a respiratory protection plan for general duty officers whose assignments do not normally include contact with hazardous materials or response to the release of hazardous materials. This plan sets the minimum standards to comply with California Code of Regulations, Title 8, Section 5144, as it pertains to the use of air-purifying respirators (APRs) and powered air-purifying respirators (PAPRs). It does not prevent agencies from electing to be more restrictive in the designated use and fit testing of any specific equipment.

## II. SCOPE

This program covers equipment selection, medical screening, fit testing, training, use and maintenance of respirators to be used by the following types of officers:

1. Officers who are issued respirators to be used for escape from hazardous atmospheres.
2. Officers who are issued respirators to be used while maintaining perimeters at hazardous materials incidents. These are officers who will be stationed in the support ("cold" or "green") zone, where contaminants are not expected to exceed levels deemed safe for unprotected persons, as determined by the incident commander.
3. Officers who are issued respirators for use in maintaining the perimeter at crowd-control incidents where chemical agents (e.g., CS or CN tear gas) are used.
4. Officers who are issued respirators to prevent exposure to tuberculosis and other serious airborne respiratory infections due to sustained contact with, or transport of, persons who are suspected of carrying an active infection with a serious airborne respiratory disease (such as tuberculosis).
5. Officers who, in exigent or emergency situations, are required to enter an area where CS, CN, smoke, or other tearing agents have been expelled.

**Note:** In these situations the incident commander, or officer in charge, shall ensure that the levels of contamination do not exceed the tearing agent manufacturer's recommendation for safe operation, or the NIOSH maximum

concentration for use (MUC), prior to entry. As of 10/1/03, the MUC for CN is 15mg/M<sup>3</sup> and the MUC for CS is 2 mg/M<sup>3</sup>.

Agencies should have written policies on the type, amount and vehicle of release of the agents following manufacturer's recommended guidelines. These policies shall be specific for indoor, outdoor and semi-contained (stadium type) situations.

### **III. PROGRAM ADMINISTRATION**

Agencies shall designate a respiratory protection program administrator to oversee this program. This person shall be identified in the policy by name, title and location. The Program Administrator shall be knowledgeable about the requirements of Section 5144 of Title 8 of the California Code of Regulations and all elements of the respiratory protection program. The Administrator will be responsible for assuring implementation of all elements of this program.

The program administrator is responsible for ensuring that all general duty personnel designated to use respirators are included in this program, and that the program is implemented in a consistent manner throughout the agency.

### **IV. APPROVED EQUIPMENT**

All respiratory protective equipment shall be approved by the National Institute for Occupational Safety and Health (NIOSH) for the environment in which it is going to be used. The following definitions apply to equipment that will be issued to officers under this program:

**Air-purifying respirator (APR)** means a respirator that works by removing gas, vapor, or particulate, or combinations of gas, vapor, and/or particulate from the air through the use of filters, cartridges, or canisters that have been tested and approved for use in specific types of contaminated atmospheres by NIOSH. This respirator does not supply oxygen and therefore cannot be used to enter an atmosphere that is oxygen deficient.

**Powered air-purifying respirator (PAPR)** means air-purifying respirator that uses a blower to force ambient air through air-purifying elements to the respirator facepiece or hood.

**Note:** Cartridges, canisters and filters are approved for use against specific hazards where the concentration is known or can be reasonably estimated. Some combination organic vapor/particulate cartridges and canisters are approved for use against CS and CN tear gas.



NIOSH is currently in the process of testing air-purifying respirators for protection against chemical, biological, radiological and nuclear agents including sarin (nerve agent), cyanide, phosgene, tear gas, and sulfur mustard (blister agents). When those respirators are approved, the notation CBRN will follow the NIOSH approval number, and equipment will bear the label shown below. As of September 2003, only some self-contained breathing apparatus (SCBA), which are beyond the scope of this program, have been tested and approved for this use.



## V. RESPIRATOR SELECTION

Agencies shall maintain records on the type of equipment provided to employees and under what circumstances the equipment is to be used.

**Recommended Equipment Use Chart**

<b>Respirator Use</b>	<b>Respirator Type</b>	<b>Manufacturer/model</b>
Escape from chem/bio/nuclear incidents	CBRN approved escape hood (not yet available)	
Perimeter hazmat incidents with specific industrial chemicals	Full facepiece (NIOSH approval TC 14G) combination cartridge or as specified by the <u>hazmat</u> incident commander	
Perimeter chem/bio/nuclear incident	Full facepiece (gas mask) with CBRN approval (not yet available)	
Perimeter crowd control (CS or CN tear gas)	Full facepiece (gas mask), TC 14G chloracetophenone cartridge or canister (combination organic vapor/particulate)	
Activation within crowd control area (CS or CN tear gas)	Full facepiece (gas mask) TC 14G chloracetophenone cartridge or canister (combination organic vapor/particulate)	
Respiratory illness (TB, SARS, etc)	N-95 particulate respirator TC - 84A	

## **Powered Air Purifying Respirators**

Officers who are covered in this program will be issued Powered Air Purifying Respirators (PAPR) under the following conditions:

1. The physician or other licensed health care professional (PLHCP) recommends the use of a PAPR for medical reasons.
2. The officer cannot be successfully fit-tested for a tight-fitting facepiece. These officers shall be issued a PAPR with a loose fitting hood or helmet.
3. The officer requests a PAPR.

## **VI. MEDICAL EVALUATION**

Personnel are considered medically qualified to use respiratory protective equipment after completing the POST Medical History Statement (POST 2-252) or its equivalent and successfully passing a physical examination that occurs as a condition of employment. The pre-employment physical must meet or exceed the standards described in the POST Medical Screening Manual for California Law Enforcement.

Employees who were hired prior to the implementation of the POST Medical History Statement (POST 2-252) shall complete the Cal/OSHA medical questionnaire and department medical personnel shall review it.

Medical evaluations are required for any officer when:

1. An officer reports medical signs or symptoms that are related to the ability to use a respirator,
2. A physician or other licensed health care professional (PLHCP), a supervisor, or the Program Administrator informs the agency that an officer needs to be re-evaluated,
3. Observations made during fit testing and program evaluation indicate a need for re-evaluation, or
4. A change occurs in workplace conditions (e.g., physical work effort, protective clothing, temperature) that may result in a substantial increase in the physiological burden placed on an officer.

## **VII. FIT TESTING**

Fit test procedures shall be in accordance with Appendix A of Section 5144 of Title 8 of the California Code of Regulations.

1. Before an officer is required to use any respirator with a tight-fitting facepiece (APR/PAPR), the officer must be fit tested with the same make, model, style, and size of respirator to be used. Officers shall be provided with a sufficient number of respirator models and sizes so that he/she may select an acceptable facepiece.
2. Fit tests shall be provided at the time of initial assignment and at least annually thereafter. Additional fit tests shall be provided whenever the officer, employer, PLHCP, supervisor, or program administrator makes visual observations of changes in the officer's physical condition that could affect respirator fit. These conditions include, but are not limited to, facial scarring, dental changes, cosmetic surgery, or an obvious change in body weight.
3. The person who administers the fit test shall complete fit test training. Agencies may accomplish this training through their fire agency, OSHA, or the manufacturer of the equipment. Documentation of all training must be maintained in the department program records. All personnel qualified to fit-test must keep up to date on their training.
4. Prior to the fit test, the officer shall be shown the proper procedures for donning a respirator. The officer shall demonstrate donning the respirator, adjust the straps, and perform positive and negative pressure fit checks.
5. Respirators with tight-fitting facepieces do not seal properly when facial hair comes between the sealing surface of the facepiece and the face, or when it interferes with valve function. Therefore, any officer who has facial hair that interferes with sealing surfaces, or who cannot be successfully fit tested with a tight-fitting facepiece respirator shall be issued a PAPR with a hood or helmet.
6. Officers who wear corrective glasses or other personal protective equipment must be sure that such equipment is worn in a manner that does not interfere with the facepiece seal. The glasses or personal protective equipment that must be worn with the respirator shall be taken to the fit-test assessment and worn during the test.
7. Officers who are issued tight-fitting facepiece gas/vapor air purifying respirators (gas masks) shall be provided with either a qualitative (employee response to test agent) or quantitative (numerical measurement of leakage) method fit test. Agencies must indicate in their department program records which test was utilized and the results of the tests.

8. An escape hood is not a tight-fitting facepiece, and need not be fit tested. Officers who are issued escape hoods shall practice donning and removing the hood during training.

## VIII. RESPIRATOR USE

**Escape:** For escape from the release of hazardous materials, officers will be provided with (*agency to select*)

- \_\_\_\_\_ Air purifying Escape Hoods
- \_\_\_\_\_ Combination cartridge air-purifying respirator
- \_\_\_\_\_ CBRN approved air-purifying respirator
- \_\_\_\_\_ Other

**Entry:** Respirators issued under this program shall not be used to enter any area that is designated as the exclusion ("hot" or "red") zone, or the contaminant reduction ("warm" or "yellow") zone of a hazardous materials incident. They also should not be used to enter any areas that are known or suspected to be oxygen deficient, or that contain concentrations of hazardous substances that are unknown or are immediately dangerous to life or health (IDLH). Respirator use shall not conflict with the agency's emergency response plan.

**Continuous duty:** For continuous duty in maintaining the perimeter of hazardous materials or crowd control incidents, approved gas masks and other air-purifying respirators shall be used. Respirators shall be selected that are approved for the contaminants that are believed to be present, and wearers shall not be located in atmospheres in which concentrations exceed the protection factor of the respirator. The program administrator or incident commander shall determine a cartridge change schedule.

**Breakthrough:** If an officer detects breakthrough, the officer shall exit the area immediately, or as soon as safety conditions permit, remove the respirator and perform decontamination procedures. Breakthrough shall be reported to the incident commander or officer in charge. The incident commander or officer in charge shall re-evaluate potential exposures and determine whether it is necessary to redefine the incident perimeter.

**Note:** Some contaminants are detectable at levels that are below Cal/OSHA permissible exposure limits. Therefore detection of contaminants by a respirator user does not necessarily mean that officers are being exposed above the concentrations permitted under this program.

**TB and other infectious airborne diseases:** Particulate respirators shall be used when an officer is in sustained contact (including transport in a closed vehicle) with a person who is suspected of carrying an active infection with a serious airborne respiratory disease (such as tuberculosis), and who cannot be masked. Used respirators shall be discarded in appropriate containers, in accordance with the department's infection control procedures.

## **IX. TRAINING**

Cal/OSHA requires agencies to conduct training for all personnel designated to use respirators.

1. The training shall include at least the following:
  - a. The specific circumstances under which respirators are to be used, including illustrative scenarios that identify the proper use by general-duty officers.
  - b. Why the respirator is necessary and how proper fit, usage, or maintenance can ensure the protective effect of the respirator.
  - a. What the respirator's limitations and capabilities are in terms of protecting against chemical agents and other respiratory hazards.
  - b. How to effectively use the respirators in emergency situations, including situations when the respirator malfunctions.
  - c. How to inspect, put on, remove, use, and check the seals of the respirator.
  - d. How to maintain and store the respirator. Officers who are issued PAPRs shall be instructed in procedures for charging and maintaining the batteries, and for checking the flow rate.
  - e. How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
  - f. How to decontaminate (or safely dispose of) a respirator that has been contaminated with chemicals or hazardous biological materials.
2. Training shall be provided at the time of initial assignment to respirator use, and at least annually thereafter.
3. Additional training shall be provided when there is a change in the type of respiratory protection used, or when inadequacies in the officer's knowledge or use of the respirator indicate that he/she has not retained the requisite understanding or skill.

4. This training can be accomplished by in-house training, viewing the POST video on respiratory protective equipment use, or by a combination of both.

## **X. MAINTENANCE**

Agencies shall have a procedure in place for maintaining, cleaning, disinfecting, storing, inspecting and repairing all respiratory protective equipment used by department personnel.

### **Cleaning and Disinfecting**

Each respirator user shall be provided with a respirator that is clean, sanitary, and in good working order. The agency will ensure that respirators are cleaned and disinfected at the following intervals:

1. Respirators issued for the exclusive use of an officer shall be cleaned and disinfected as often as necessary to maintain a sanitary condition.
2. Respirators issued to more than one officer shall be cleaned and disinfected before being worn other persons.
3. Respirators maintained for emergency use shall be cleaned and disinfected after each use.
4. Respirators used in fit testing and training shall be cleaned and disinfected after each use (before being used by another person).
5. Respirators that have been contaminated with certain chemical, biological, or radioactive (CBRN) agents require special decontamination procedures to reduce the likelihood of secondary exposures to the user or assisting personnel. Users will be informed of any special decontamination procedures that are required.

### **Storage**

All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals. They shall be packed or stored to prevent deformation of the facepiece and exhalation valve.

To protect the integrity of the equipment, agencies must follow the manufacturer's recommendation for storage. Agencies must also maintain records of where all equipment is stored.

Agencies should take into consideration the need for charging PAPR batteries when they are stored or not in use.

## Recommended Storage Location Chart

Type of respirator	Storage
1. Emergency escape hood	
2. Gas masks	
3. Particulate respirator for use with possibly infectious persons	
3. PAPRs <b>Note:</b> Battery should be kept charged with the facepiece unit, or if battery and facepiece are kept in patrol vehicle, a spare battery should be kept charged and available.	

### Inspection

Single-use particulate respirators shall be inspected prior to use. All other respirators shall be inspected at least monthly and prior to each use.

Inspections should include a check of:

- Respirator function, tightness of connections, condition of the various parts including, but not limited to, the facepiece, head straps, valves, and cartridges, canisters or filters.
- All rubber or plastic parts for pliability and signs of deterioration.
- PAPR connecting tubes or hoses and batteries.

Each inspection shall include donning the respirator and performing positive and negative pressure fit-checks.

An inspection log shall be kept with the respirator (except single use particulate respirators).

### Repairs

Any defective respirators shall be removed from service, and shall be adjusted, repaired or discarded as appropriate. Written policies shall indicate where defective equipment must be turned in, the person responsible for receiving it and how replacement equipment is to be issued.

Only persons who have been trained to perform such operations shall make repairs or adjustments to respirators. All repairs shall be made according to the manufacturer's recommendations and specifications for the type and extent of repairs to be performed, using only the manufacturer's NIOSH-approved parts.

## **XI. PROGRAM EVALUATION**

The program administrator will conduct a periodic review of the agency's program to ensure the agency adheres to all subsections of this program.

## **XII. RECORD KEEPING**

The program administrator is responsible for ensuring that proper records are kept for this program. This includes:

1. Personnel medical records shall be retained and made available in, accordance with the California Code of Regulations, Section 3204, Title 8, for a minimum of thirty (30) years after an employee's separation or termination.

Agencies may follow departmental policies for the maintenance of confidential medical records. The policy must indicate where these records are maintained, who is responsible for them, and how employees, their representatives, or Cal/OSHA personnel can obtain access to the records.

2. Documentation of training, inspection and maintenance.
3. Documentation of fit testing, including:
  - a. Type of test (qualitative or quantitative)
  - b. Name or ID of employee
  - c. Make, model, style and size of respirator tested
  - d. Date of test
  - e. Results of the fit test
4. A copy of this program and the above records shall be made available to all affected employees, their representatives, and representatives of the Chief of the Division of Occupational Safety and Health.

## **XIII. ADDITIONAL INFORMATION**

Additional information can be found on these websites:

**Cal/OSHA respirator standard:** <http://www.dir.ca.gov/Title8/5144.html>

**Cal/OSHA respirator publication:**  
[http://www.dir.ca.gov/dosh/dosh\\_publications/respiratory.pdf](http://www.dir.ca.gov/dosh/dosh_publications/respiratory.pdf)

**NIOSH respirator page:** <http://www.cdc.gov/niosh/topics/respirators/>